



เอกสารประกอบการสอน รายวิชา ภาษาอังกฤษ 4

โดย

ดร. สิรินทร ศรีโพธิ์
สาขาวิชาภาษาอังกฤษ
สำนักวิชาเทคโนโลยีสังคม

ผลงานในโครงการหนึ่งอาจารย์หนึ่งผลงาน ประจำปี 2550

The Deadliest Tsunami in History?

L1 The earthquake that generated the great Indian Ocean tsunami of 2004 is estimated to have released the energy of 23,000 Hiroshima-type atomic bombs, according to the U.S. Geological Survey (USGS). By the end of the day more than 150,000 people were dead or missing and millions more were homeless in 11 countries, making it perhaps the most destructive tsunami in history.

The epicenter of the 9.0 magnitude quake was under the Indian Ocean near the west coast of the Indonesian island of Sumatra, according to the USGS, which monitors earthquakes worldwide. The violent movement of sections of the Earth's crust, known as tectonic plates, displaced an enormous amount of water, sending L10 powerful *shock waves* in every direction. The earthquake was the result of the sliding of the portion of the Earth's crust known as the India plate under the section called the Burma plate. The process has been going on for millennia, one plate pushing against the other until something has to give. The result on December 26 was a rupture the USGS estimates was more than 600 miles (1,000 kilometers) long, displacing the seafloor above the rupture by perhaps 10 yards (about 10 meters) horizontally and several yards vertically. That doesn't sound like much, but the trillions of tons of rock that were moved along hundreds of miles caused the planet to shudder with the largest magnitude earthquake in 40 years.

L20 Above the disturbed seafloor the great volume of the ocean was displaced along the line of the rupture, creating one of nature's most deadly phenomena: a tsunami. Within hours killer waves radiating from the earthquake zone slammed into the coastline of 11 Indian Ocean countries, snatching people out to sea, drowning others in their homes or on beaches, and demolishing property from Africa to Thailand.

Tsunamis have been relatively rare in the Indian Ocean, at least in human memory. They are most prevalent in the Pacific. But every ocean has generated the scourges. Many countries are at risk. The Indian Ocean tsunami traveled as much as 3,000 miles (nearly 5,000 kilometers) to Africa, arriving with sufficient force to kill people and destroy property.

L30 A tsunami may be less than a foot (30 centimeters) in height on the surface of the open ocean, which is why they are not noticed by sailors. But the powerful pulse of energy travels rapidly through the ocean at hundreds of miles per hour. Once a tsunami reaches shallow water near the coast *it* is slowed down. The top of the wave moves faster than the bottom, causing the sea to rise dramatically.

Tsunamis can extend inland by a thousand feet (300 meters) or more. The enormous force and weight of so much water sweeps away almost everything in its path. Many people were crushed by debris or when the sea hurled them against structures.

Geographic Knowledge Saved Lives

L40 People who knew geography knew what the receding ocean meant. Survivors who knew it meant trouble reported how they ran for high ground, rounded up family and friends, and tried to warn people who were drawn to the water's edge. Experts say that a receding ocean may give people as much as five minutes' warning to escape to high ground. That may have been enough time for many of the people who were killed by the 2004 tsunami to save themselves, if only they knew what to do.

A tsunami is a series of waves, and the first wave may not be the most dangerous. A tsunami "wave train" may come as surges five minutes to an hour apart. The cycle may be marked by repeated retreat and advance of the ocean. L50 Some people did not know this on December 26. Once the first wave had gone, they thought it was safe to go down to the beach.

Questions

1. What is the main idea of the story?
 - a) The process of one plate push against the other under the water causes the tsunami that can destroy everything and killed people who have no background of this phenomenon.
 - b) Shock waves kill people because they travel as nearly 5,000 kilometers.
 - c) Tsunami happens both on the surface of the open ocean and inland.
 - d) The earthquake is the main cause of tsunami in Indian Ocean.

2. What is true about the story?
 - a) Africa and Thailand are the most damaged countries by tsunami.
 - b) The 23,000 Hiroshima-type atomic bombs causes the great Indian Ocean tsunami of 2004
 - c) People were killed because they did not understand the signal of the tsunami such as the receding ocean.
 - d) Tsunami often occurs in Indian Ocean and destroys everything in its path.

3. What is the best description for "shock waves" in Line 10?
 - a) the violent movement of sections of the Earth's crust
 - b) the direction of water
 - c) the movement of seafloor
 - d) the enormous amount of water

4. What does the story imply?
 - a) It is the responsibility of the government to take care of people who live near the beaches.
 - b) People in risk countries should know what to do when tsunami were happened.
 - c) Tsunami in Indian Ocean in as much dangerous as in Pacific.
 - d) Tsunami that extends inland is more powerful than in the ocean.

5. What does "it" in Line 33 refer to?
 - a) shallow water
 - b) coast
 - c) tsunami
 - d) powerful pulse of energy

Key

1: a, 2: c, 3: d, 4: b, 5: c

Tectonic uplift

L1 Tectonic uplift is a geological process most often caused by plate tectonics which increases elevation. The opposite of uplift is *subsidence*, which results in a decrease in elevation. Uplift may be orogenic or isostatic. Orogenic uplift is the result of tectonic plate collisions and results in mountain ranges or a more modest uplift over a large region. The Himalaya were (and are still being) formed by the collision of two continental plates, the Indian and Eurasian Plates. This ongoing collision produced the Tibetan Plateau as well as the Himalaya and associated ranges. The Ozark Plateau is a broad uplifted area which resulted from the Ouachita Orogeny to the south during L10 the Permian Period. Another related uplift is the Llano Uplift in Texas, a geographical location named after *its* uplift features. The Colorado Plateau with its spectacular scenic canyons, the Grand Canyon, is also the result of broad tectonic uplift followed by river erosion.

Isostatic uplift includes the gradual uplift following rapid erosional removal of material from a mountain range. The land rises as a result of the removal of the weight. Another example of isostatic uplift is post-glacial rebound following the melting of continental glaciers and ice sheets. The Hudson Bay region of Canada and the Great Lakes of Canada and the United States are currently undergoing gradual rebound as a result of the melting of L20 the ice sheets 10,000 years ago.

In a few cases, tectonic uplift can be seen in the cases of coral islands. This is evidenced by the presence of various oceanic islands comprised entirely of coral, which otherwise appear to be high islands (i.e., islands of volcanic origin). Examples of such islands are found in the Pacific, notably the three great phosphate rocks, Nauru, Makatea, and Banaba as well as Fatu Huku in the Marquesas Islands and Henderson Island in the Pitcairn Islands. The uplift of these islands is the result of the movement of oceanic tectonic plates. Sunken islands or guyots with their coral reefs are the result of crustal subsidence as the oceanic plate carries the islands to deeper or lower oceanic L30 crust areas.

*****end*****

Questions

1. What does the story tell you?
 - a) The uplift of the plate causes the plateaus.
 - b) Tectonic uplift often happens on land than in the ocean.
 - c) A broad uplifted area is the result from Isostatic uplift.
 - d) Earth's surface can increase and decrease in elevation both on land and in the ocean by the collisions or removal of material from the mountain range.

2. What is the detail from the reading passage?
 - a) Nowadays, Himalaya does not formed by the collision of the Indian and Eurasian Plates.
 - b) The removal of the weight always happens at the same time as the uplift.
 - c) Isostatic uplift is a type of Orogenic uplift which its process causes the uplift in a large area.
 - d) Tectonic uplift in the ocean can cause a new island.

3. Which word could be replaced with "subsidence" in Line 2?
 - a) elevation
 - b) increase
 - c) collision
 - d) decrease

4. What does the story imply?
 - a) Tectonic uplift on land affects to human life much more than tectonic in the ocean.
 - b) The features of the earth can always be uplifted.
 - c) The increase elevation of Earth's surface happens faster than decrease elevation.
 - d) Isostatic uplift happens in the same area as orogenic uplift.

5. What does "its" in Line 11 refer to?
 - a) Texas's
 - b) Llano's
 - c) location's
 - d) related uplift's

Key

1: d, 2: d, 3: d, 4: b, 5: a

Avalanche and landslide

L1 An avalanche is a massive slide of snow, ice, rock or debris down a mountainside. Provoked by an earth tremor, extreme precipitation or man-made disturbances (such as a loud noise or the heavy movement of a skier or snowboarder), an avalanche can reach speeds of over 200 m/h (300 km/h). The impact of the falling material and the winds produced by the flow can cause extensive damage to anything in its path. According to experts, there are some 1 million avalanches yearly.

L10 A landslide is a type of avalanche consisting of materials such as rock, slag or coal. More specifically, rockslides are the rapid downhill movement of large masses of rock with little or no hydraulic flow, similar to an avalanche. Water-saturated soil or clay on a slope may slide downhill over a period of several hours. Earthflows of this type are usually not serious threats to life because of their slow movement, yet *they* can cause blockage of roads and do extensive damage to property. Mudflows are more spectacular streams of mud that pour down canyons in mountainous regions during major rainstorms where there is little vegetation to protect hillsides from erosion. Submarine slides, or a sliding mix of seawater and mud, are called turbidity currents. Undersea landslides can travel several hundred miles across very gradual slopes, riding on a thin film of water that reduces friction.

L20 Among the processes that can lead to a landslide are the steepening of a slope by natural erosion or excavation, the overloading of the slope by an inflow of water, and the motion caused by an earthquake that shaking unconsolidated or weathered material from slopes.

Although gravity acting on an over steepened slope is the primary reason for a landslide, there are other contributing factors:

- erosion by rivers, glaciers, or ocean waves create over steepened slopes
- rock and soil slopes are weakened through saturation by snowmelt or heavy rains
- earthquakes create stresses that make weak slopes fail
- volcanic eruptions produce loose ash deposits, heavy rain, and debris flows
- L30 ▪ vibrations from machinery, traffic, blasting and even thunder may trigger failure of weak slopes
- excess weight from accumulation of rain or snow, stockpiling of rock or ore, from waste piles, or from man-made structures may stress weak slopes to failure and other structures
- groundwater pressure acting to destabilise the slope
- in shallow soils, the removal of deep-rooted vegetation that binds the colluvium to bedrock.

L40 Worldwide, there are thousands of deaths and injuries, and billions of dollars in damage caused by landslides. These slides are most likely to happen in places where such slides have already occurred, at the bases of steep slopes, at the bases of drainage channels and on developed hillsides where leach-field septic systems are used. Rockslides triggered by an earthquake in Montana in 1959 caused an entire mountainside to slide into the Madison River gorge, killing 27 people in its path, damming the gorge, and forming a new lake. Humans have triggered a number of tragic landslides that have caused great damage and loss of life. In the Los Angeles area of California, extensive real estate development carried out on hillsides has resulted in widespread mudflows after winter rains have saturated the over-steepened embankments of soil. In some areas, slow-moving earthflows have been initiated by the lubrication of certain types of underlying clays by septic tank effluent.

*****end*****

Questions

1. What is the main idea of the story?
 - a) In a year, lots of people die and injured because of landslide.
 - b) Landslide happens by many reasons especially by steepened slope and it causes great damage to people.
 - c) Human activities are the main cause of landslide.
 - d) Landslide consists of materials and moves with high speed.

2. What is true according to the story?
 - a) Water-saturated soil on a slope is not dangerous and does not damage anything because it moves slowly.
 - b) The landslide does not happen in the same place. It always happens in the new place.
 - c) The earthquake and heavy rain causes the failure of weak slope.
 - d) The landslide can happen only on the mountain.

3. What is the meaning of "trigger" in Line30?
 - a) move
 - b) steepen
 - c) happen
 - d) cause

4. What does the story imply to?
 - a) Human cannot stop the damage of the landslide.
 - b) Most of the time, landslide happens because of the change of land slopes.
 - c) Rockslide is more dangerous than Mudslide.
 - d) Human always loss the life when the landslide happens.

5. What does "they" in Line 12 refer to?
 - a) water-saturated soil or clay
 - b) movement
 - c) rock
 - d) landslide

Key

1: b, 2: c, 3: d, 4: b, 5: a

L1 Aug1 (Bloomberg) - Japan's government said it started an earthquake warning system for railways, hospitals and other subscribers that sends alerts as soon as it detects the first waves of an earthquake.

The Emergency Quake Alert system, which connects subscribers to an online network, may allow trains to slow down, construction workers to be *evacuated* and manufacturing plants to stop operations before the shaking begins. The system was put in place today.

Thirty-four companies and organizations, including manufacturers, research institutes and hospitals, signed up for the service, said Makoto L10 Saito, an official at the Meteorological Agency's seismological and volcanic department.

Japan, one of the world's most earthquake-prone countries, is located in a zone where the Eurasian, Pacific, Philippine and North American tectonic plates meet and occasionally shift, causing quakes. The Great Hanshin Earthquake, which hit western Japan on Jan 17, 1995, caused 6,434 deaths.

The system won't be available to individual households for the time being. Lightning may cause false alarms in the system.

"We are concerned that any false alarm could create panic," Saito said.

A network of sensors detects so-called primary, or P waves, which L20 travel faster through the ground than shear, or S waves, which cause destructive shaking, allowing the possibility of providing time for warning of a big quake. Quakes of magnitude 5 and more can cause considerable damage depending on their depth.

*****end*****

Questions

1. What is the title of the story?
 - a) A network of sensors detects
 - b) Japan, the world's most earthquake-prone countries
 - c) Japan starts earthquake warning system for railways, hospitals
 - d) The emergency quake alert system for companies and organizations

2. What is true about the story?
 - a) The quakes that less than magnitude 5 are not as much dangerous.
 - b) The emergency quake alert system reports every shaking, even the light shaking, so people can be save.
 - c) The shear waves is more effective in warning than primary waves.
 - d) The railways is the main reason of using the emergency alert system.

3. The word "evacuate" in Line 6 mean ...?
 - a) to be away from the dangerous
 - b) to warn
 - c) to stop
 - d) to travel

4. What can you imply from the story?
 - a) The system is successful in warning Japanese from earthquake.
 - b) Japanese becomes afraid of the earthquake.
 - c) In the future, the earthquake warning system will be available to individual households.
 - d) The quakes in Japan are the most dangerous earthquake in the world.

5. What does "it" in Line 3 refer to?
 - a) Japan's government
 - b) warning system
 - c) railways
 - d) hospitals

Key

1: c, 2: a, 3: a, 4: b, 5: b

Geology of the Grand Canyon

L1 The Grand Canyon is a very colorful, steep-sided gorge, carved by the Colorado River, in the U.S. state of Arizona. The details of the canyon's formation are still highly controversial. Geologists continue to debate ideas about the formation of Grand Canyon. According to Geologist Wayne Ranney: "To date, geologists have been unable to determine the canyon's precise age and what specific processes were at work in carving it". There is no authoritative theory on the formation of Grand Canyon.

L10 The major geologic exposures in Grand Canyon range in age from the 2 billion year old Vishnu Schist at the bottom of the Inner Gorge to the 230 million year old Kaibab Limestone on the Rim. Many of the formations were deposited in warm shallow seas, near-shore environments (such as beaches), and swamps as the seashore repeatedly advanced and retreated over the edge of a proto-North America. Major exceptions include the Permian Coconino Sandstone which was laid down as sand dunes in a desert and several parts of the Supai Group.

L20 The great depth of the Grand Canyon and especially the height of its strata (most of which formed below sea level) can be attributed to 5,000 to 10,000 feet (1500 to 3000 m) of uplift of the Colorado Plateaus, starting about 65 million years ago (during the Laramide Orogeny). This uplift has steepened the stream gradient of the Colorado River and its tributaries, which in turn has increased *their* speed and thus their ability to cut through rock.

The Colorado River basin (of which the Grand Canyon is a part) has developed in the past 40 million years and that the Grand Canyon itself is probably less than five to six million years old (with most of the downcutting occurring in the last two million years). The result of all this erosion is one of the most complete geologic columns on the planet.

L30 Wetter conditions during the ice ages also increased the amount of water in the Colorado River drainage system. The ancestral Colorado River responded by cutting its channel faster and deeper. The base level and course of the Colorado River (or its ancestral equivalent) changed 5.3 million years ago when the Gulf of California opened and lowered the river's base level (its lowest point). This increased the rate of *erosion* and cut nearly all of the Grand Canyon's current depth by 1.2 million years ago. The terraced walls of the canyon were created by differential erosion.

About one million years ago, volcanic activity (mostly near the western canyon area) deposited ash and lava over the area, which at times completely obstructed the river. These volcanic rocks are the youngest in the canyon.

*****end*****

Questions

1. What is the main idea of the story?
 - a) Although there is no theory to support how Grand Canyon forms, the uplift of plateau and the draining system of Colorado River are possible causes of it.
 - b) Grand Canyon consists of high strata and its formation started about 65 million years ago.
 - c) It is believed that Grand Canyon formed by volcanic activity that obstructed the river.
 - d) The age of Grand Canyon can determine by the geologic columns.

2. What is not true about the story?
 - a) The rock was cut by the high speed river and came out with a depth of Grand Canyon
 - b) The age of Grand Canyon could be about 2 billion years old to 230 million years.
 - c) The formation of Grand Canyon can describe by the uplift of the Colorado Plateaus
 - d) The erosion causes the geologic columns and the great depth of Grand Canyon

3. What does "erosion" in Line 32 mean?
 - a) formation
 - b) destruction or removal of rock or soil
 - c) steepened stream
 - d) uplift

4. What does the story imply?
 - a) The course of the Colorado River will no longer change the formation of Grand Canyon.
 - b) The formation of Grand Canyon has changed from time to time by different causes
 - c) The geologist believes that the lower of base river is the cause of Grand Canyon formation.
 - d) The height of canyon strata always increases every year.

5. What does "their" in Line 21 refer to?
 - a) Colorado River
 - b) erosion
 - c) height
 - d) stream

Key

1: a, 2: c, 3: b, 4: c, 5: d

Earthquake

L1 Most earthquakes are causally related to compressional or tensional stresses built up at the margins of the huge moving lithospheric plates that make up the earth's surface. The immediate cause of most shallow earthquakes is the sudden release of stress along a fault, or fracture in the earth's crust, resulting in movement of the opposing blocks of rock past one another. These movements cause vibrations to pass through and around the earth in wave form, just as ripples are generated when a pebble is dropped into water. Volcanic eruptions, rockfalls, landslides, and explosions can also cause a quake, but most of these are of only local extent. Shock waves from a powerful earthquake can trigger smaller earthquakes in a distant location L10 hundreds of miles away if the geologic conditions are favorable.

Earthquakes are not distributed randomly over the globe but tend to occur in narrow, continuous belts of activity. Approximately 90% of all earthquakes occur in these belts, which define the boundaries of the Earth's plates. The plates are in continuous motion with respect to one another at rates on the order of centimeters per year; this plate motion is responsible for most geological activity.

L20 Plate motion occurs because the outer cold, hard skin of the Earth, the lithosphere, overlies a hotter, soft layer known as the asthenosphere. Heat from decay of radioactive minerals in the Earth's interior sets the asthenosphere into thermal convection. This convection has broken the lithosphere into plates which move about in response to the convective motion. As the plates move past each other, little of the motion at *their* boundaries occurs by continuous slippage; most of the motion occurs in a series of rapid jerks. Each jerk is an earthquake. This happens because, under the pressure and temperature conditions of the shallow part of the Earth's lithosphere, the frictional sliding of rock exhibits a property known as stick-slip, in which frictional sliding occurs in a series of *jerky* movements, interspersed with periods of no motion-or sticking. In the geologic time frame, L30 then, the lithospheric plates chatter at their boundaries, and at any one place the time between chatters may be hundreds of years.

L40 Earthquake prediction research has been going on for nearly a century. Unfortunately, successful earthquake predictions are extremely rare. There are two basic categories of earthquake predictions: forecasts (months to years in advance) and short-term predictions (hours or days in advance). Forecasts are based a variety of research, including the history of earthquakes in a specific region, the identification of fault characteristics (including length, depth, and segmentation), and the identification of strain accumulation. Data from these studies are used to provide rough estimates of earthquake sizes and recurrence intervals.

*****end*****

Questions

1. What is the main idea of the story?
 - a) The vibrations of wave is the main cause of an earthquake.
 - b) The rapid movement of the Earth's plates can cause the earthquake in a specific region; however, there is an attempt by the researcher to predict the size and the recurrence intervals of the earthquake.
 - c) The geologist can predict the earthquake by forecasts and short-term predictions.
 - d) Human can prevent the damage from the earthquake by predicting the size of it.

2. Which statement is not true about the story?
 - a) The history of earthquake can estimate the exact size of the earthquake.
 - b) Almost the geological activity affect from the motion of plate.
 - c) The weather is the cause of the plate motion.
 - d) The movement of plates does not always in a series of rapid jerks but the sticking also.

3. Which word can replace the word "jerky" in Line 28?
 - a) motion
 - b) rapid
 - c) small
 - d) slow

4. What can you imply from the story?
 - a) The percent of earthquake occurs in continuous belts of activity is increasing.
 - b) People who live over the boundaries of Earth's plates are familiar with the earthquake.
 - c) The earthquake predictions will be successful in the near future.
 - d) The geological activity is easy to predict because it happens in the belts.

5. What does "their" in Line 23 refer to?
 - a) margins
 - b) surface
 - c) plates
 - d) lithosphere

Key

1: b, 2: a, 3: b, 4: b, 5: c

Changing Living Planet Name:

Group:

No:

Texts and Answers sheet	Summary
Text 1: The Deadliest Tsunami in History? 1. 2. 3. 4. 5.	
Text 2: Tectonic Uplift 1. 2. 3. 4. 5.	
Text 3: Landslide 1. 2. 3. 4. 5. 6.	
Text 4: Aug 1 (Bloomberg) 1. 2. 3. 4. 5.	
Text 5: Geology of the grand Canyon 1. 2. 3. 4. 5. 6.	
Text 6: Earthquake 1. 2. 3. 4. 5.	

The Dawn of the Angkor Civilization

L1 Ban Non Wat is a large prehistoric site located in the upper Mun Valley of Northeast Thailand. Like many hundreds of other settlements in this region, *it* was encircled by multiple moats and banks during the Iron Age, which began from about 400 BC. Excavations began there in 2002, and after five seasons and 18 months of digging, a remarkable record of prehistoric achievement has been revealed.

The first settlement is represented by five graves, in which the dead were interred in a crouched position. One of these early burials involved a child, whose skeletal arms still clutched his mother. These people could well have been local L10 hunter gatherers, who lived on this low mound before 2000 BC. At that period, the region would have been covered in a dense forest, bisected by many streams.

First Farmers at Ban Non Wat

It was into this rich habitat that the first farmers penetrated. From about 2100 BC, groups of rice farmers progressively moved south bringing their domestic cattle and pigs, and their techniques of weaving and fashioning superb pottery vessels. In the natural course of events, they founded a cemetery. Some of these early farmers were buried in large, lidded pots, decorated with complex incised and painted designs.

Bronze Age at Ban Non Wat

L20 Such Neolithic sites are very rare in Southeast Asia, but after about six or seven centuries, knowledge of alloying copper and tin, and casting objects of bronze, began to pass from Southern China, along the established trade routes. At Ban Non Wat, this led to a major cultural change. Some individuals were now buried with very great wealth and ceremony. Perhaps these rich aristocrats were able to command the supply and distribution of the precious new metal, for we find bronze axes, bells and awls only with the richest people. Nor were bronzes only found with adults. Some infants were placed in graves up to four yards long, with thousands of shell beads, shell and marble bangles, up to 25 pottery vessels and bronze axes. Some of the fine ceramics were embellished with complex L30 painted designs. One seems to portray a stylized human face with eerie eyes looking up from the grave.

Some of these very rich individuals were first buried with all their finery, and then their bones were exhumed before being carefully replaced in the grave. Could it be that the ancestors were being removed for special ritual functions, perhaps feasting with and for the dead?

Not all the Bronze Age occupants of Ban Non Wat were interred with such ceremony; nor was life easy during this period. Many of the dead were infants. There was a row of infant burials in one part of the excavated area. A child was interred with a bronze arrowhead still sharp to the touch. Perhaps conflict with L40 other groups was a regular occurrence.

Ban Non Wat During the Iron Age

It is apparent that this period of difficulty continued into the Iron Age. Row upon row of Iron Age burials were found in the cemetery that overlay the preceding Bronze Age layers. The fine, thin ceramic vessels of this period often contained up to 12 fish skeletons, while the severed feet of water buffalo were regularly found as mortuary offerings. By about 200 BC, several exotic and

important forms of jewellery were in vogue. Earrings and beads of glass were occasionally worn. Some people owned fine agate or carnelian beads, strung as necklaces. These objects probably reflect remote and second hand contact with a L50 developing trade network linking Southeast Asia with India.

The Dawn of Angkor

This was the beginning of fruitful interchange of goods and ideas that contributed to the rapid transition to early civilizations, like that at Angkor. There were other factors as well. The Iron Age leaders of the Mun Valley commanded an inexhaustible supply of salt, a vital commodity then and now. As populations grew, so warfare and competition increased. Large and growing settlements were now ringed with moated defences, a further chapter in a remarkable cultural sequence represented fully at the remarkable site of Ban Non Wat.

*****end*****

Questions

1. What is the main idea of the story?
 - a) People in past contacted with Chinese and Indian.
 - b) The civilization of people at Mun Valley can be investigated at Ban Non Wat.
 - c) Our culture was affected and changed because of China and India.
 - d) The information from the burial in different age tells us about the cultural and changed from past to civilization.

2. What is true from the story?
 - a) Every dead person in Bronze Age were buried with thousands of shell beads, shell and marble bangles, up to 25 pottery vessels and bronze axes.
 - b) A successful finding of prehistory at Mun Valley happened in 2002.
 - c) The bones of dead body were dug again in order to celebrate.
 - d) The dawn of Angkor at Ban Non Wat began in Bronze Age.

3. What does "Dawn" in the title mean?
 - a) Culture
 - b) Excavation
 - c) Settlement
 - d) Beginning

4. What do you imply from the story?
 - a) People at Ban Non Wat are richer than people in past.
 - b) In past, infants were killed by arrowhead and were sacred to the god.
 - c) Burial ceremony was important for people.
 - d) In past, children died much more than adult.

5. What does "it" in Line 2 refer to?
 - a) Mun Valley
 - b) Ban Non Wat
 - c) Angkor
 - d) Thais

Key

1: d, 2: c, 3: d, 4: c, 5: b

Sailing to distant lands

L1 New finds are bringing added understanding to the way ancient communities in Upper Egypt functioned, and to the importance of commerce and cultural development. Nevine El-Aref has been finding out about a pre-dynastic funerary complex and new evidence concerning trade with the legendary land of Punt

The mysterious Land of Punt, at one time identified with the Somali coast and now thought to be located in the southern Sudan or the Eritrean region of Ethiopia, was Ancient Egypt's source of luxury products, the place from where they imported valuable items not available in their own country.

L10 Regular missions set sail southwards through the Red Sea from the Fifth Dynasty or earlier, returning to Egypt with gold, ivory, ebony, gum and incense to be burned in temple rituals. The hides of giraffe, panther and cheetah, which were worn by temple priests, were imported along with live animals as well as the sacred cynocephalus or dog-faced baboon. Little wonder, then, that Punt became known as the "Land of Gods", and as the personal pleasure garden of the great god Amun.

L20 The oldest surviving record of a journey to Punt is inscribed on one of the fragments of what became known as the Palermo stone, which dates from the Fifth Dynasty. By the Middle Kingdom (2055-1650 BC) there was regular trade with Nubia, and an 11th-Dynasty record reveals that Mentuhotep III ordered no fewer than 3,000 men to sail to this source of plenty -- a place also mentioned in contemporary poems.

L30 Trade between Egypt and Punt appears to have been suspended after the 12th Dynasty and not resumed until early in the 18th. The relief portrays a total of 10 ships, five entering harbour and five loading and departing. It is assumed that the ships were prefabricated on the Nile at Coptos, a point where it most closely approaches the Red Sea, then were stripped down and the components transported through Wadi Al-Hamamat by donkey caravan to Qusseir where they were reassembled. On completion of the mission to Punt, an often dangerous journey, and the equally dangerous return journey to the Egyptian port, the ships had to be stripped down again and their parts carried back through the desert valley along with their rich cargoes to the Nile, where they would be re-assembled, re-loaded, and set sail to Thebes.

There are few material remains of this necessarily well-organised procedure and the arduous but necessary journey to Punt. Early last month, however, at the ancient port of Marsa Gawasis, south of Hurghada, an American-Italian team stumbled upon interesting evidence of trade between the two regions.

L40 They discovered a large, man-made cave. Just inside the entrance they unearthed two cedar steering oars, limestone block-anchors, rigging ropes and other items, Zahi Hawass secretary general of the Supreme Council of Antiquities (SCA) described the discovery as the first complete parts of a Pharaonic seafaring ship ever to be discovered. Pottery dating from the early 18th Dynasty (1500-1400 BC) was also found, possibly linking the discovery to Hatshepsut's expeditions to Punt.

L50 The ships built for voyages to Punt, although shaped, according to surviving reliefs -- like ordinary travelling vessels on the Nile with keels and stem and stern-post -- appear to have been more securely constructed for fast voyages in dangerous waters, and are more correctly described as trading galleys.

Along the shoreline of Wadi Gawasis, a roughly oval platform made of stone slabs and rocky coral has been excavated, along with hundreds of conch shells that had been left on its surface. "These were probably the sailors' offerings to *their* gods," Fattovich suggests.

*****end*****

Questions

1. What is the main idea of the story?
 - a) We can learn how and what people in past did from the exist materials such as pottery, oars and ships which tell us about trade and belief.
 - b) The history of trade between Punt and Egypt found in between fifth to eighteenth dynasty.
 - c) A journey from Egypt to Punt is the most dangerous so people at that time created a specific ship for traveling in dangerous waters.
 - d) The most important findings by the archaeologists is that they found a large, man-made cave.

2. What is wrong from the story?
 - a) Archaeologist also studies the past from the poems.
 - b) Egyptian who wanted to travel to Punt had to cross desert valley.
 - c) There is evidence that Egypt contacted Punt during 12th to 18th Dynasty.
 - d) The ships built during 18th Dynasty were used for the purpose of trade.

3. What could be another meaning of "unearthed" in Line 40?
 - a) found
 - b) produced
 - c) excavated
 - d) used

4. What does the story imply?
 - a) People in the Land of Punt tried to make Egyptian believed in god.
 - b) Like the far distance between Punt and Egypt, people in present can understand what people in 2055 BC did or believed.
 - c) Egyptian contacted with people in the Land of Punt because they loved trade.
 - d) The most important historical information comes from the finding during fifth Dynasty.

5. What does "their" in Line 54 refer to?
 - a) Egyptian
 - b) Punt people
 - c) American-Italian team
 - d) Wadi Gawasis people

Key

1: a, 2: d, 3: c, 4: b, 5: a

Mystery Hill: America's Stonehenge?

L1 About 40 miles north of the city of Boston, and about 25 miles inland from the Atlantic Ocean, is what appears to be the greatest, and perhaps oldest, megalithic enigma of North America. Mystery Hill, also known as "America's Stonehenge", is a site that has puzzled archaeologists for almost a century. Running across the 30 acres of hillside are a series of low walls, cave-like primitive buildings, and tunnels that are spread about with, according to one archaeologist, "gigantic confusion and childish disorder, deep cunning and rude naively."

L10 While the hill is compared to the English Stonehenge circle, it is, at first glance, physically quite different. Stonehenge is located on a plain, not a hill, and is arranged neatly as a series of concentric circles, horseshoes and squares. Mystery Hill seems a jumble in comparison. The stones involved in Stonehenge are larger, up to 45 tons. The stones at Mystery Hill are smaller (the largest is about 11 tons) and the construction less intricate. Both sites do have some common points, though. Firstly, *they* served as observatories. Each has been found to have astronomical alignments including summer solstice. Secondly, we know almost nothing about the builders of either location.

L20 One of the main features of the site is an enormous flat stone, like a great table, resting above the ground on four legs. Around the edge of the table runs a groove that leads to a spout. This great slab has been named the "Sacrificial Stone" and certainly may have served such a function. Underneath the Sacrificial Stone is a shaft eight feet long leading to an underground chamber. It seems reasonable that this allowed a priest concealed in the chamber to speak as the voice of an oracle. To a crowd gathered around the altar the sound would appear to float up from the Sacrificial Stone like the voice of some disembodied spirit.

L30 In 1936 the site came into the hands of William B. Goodwin. Goodwin had a pet theory that Irish monks had crossed the Atlantic long before Columbus and were responsible for the structures on the hill. Goodwin conducted his own form of "archaeology" on the site by getting rid of whatever evidence that didn't fit his theory. The loss of these artifacts is one of the reasons the *enigma* of Mystery Hill is so deep. Currently the site is administered by the "America's Stonehenge" foundation and is open to visitors. A fee, used to preserve and research the site, is charged.

How old is the site? Pottery fragments have been tested and found to go back as far as 1000 BC. Charcoal from one fire pit, measured by radiocarbon dating, was found to be 4000 years old.

L40 Was the site constructed in ancient times by a people we know nothing about? That seems likely. Some theorize that site might be linked to the Greek or Phoenician cultures of the Mediterranean. Certainly there is a startling similarity between the construction of the oracle on Mystery Hill and those found in ancient temples in Malta and Greece.

The truth is we may never know who built this site. We may never know how they used the astronomical information contained in its alignments. We may never know what the voice of the oracle said. And we may never know what, or whom, was sacrificed on its hard, cold, great, stone altar.

*****end*****

Questions

1. What is the main idea of the story?
 - a) The shapes of stones at Stonehenge are different for the Mystery Hill.
 - b) The history of Mystery Hill as well as Stonehenge is still mysterious to the archaeologists because they could only predict the age of stone but not know who built and for what purpose.
 - c) Goodwin's theory destroyed parts of Mystery Hill information.
 - d) The Mystery Hill was built with the same culture as in Greek.

2. What is true from the story?
 - a) The Mystery Hill is totally different from Stonehenge.
 - b) Both Stonehenge and Mystery Hill were used under religious beliefs.
 - c) Stonehenge was built before the America's Stonehenge, Mystery Hill.
 - d) The number of stones at Mystery Hill is too many than at Stonehenge.

3. Which word can replace the word "enigma" in Line 33?
 - a) loss
 - b) mysterious
 - c) purpose
 - d) age

4. What do you imply from the reading?
 - a) The purpose of building of Stonehenge is more important than the building of Mystery Hill.
 - b) The building of Stonehenge is more difficult than Mystery Hill.
 - c) The use of Stonehenge for astronomical alignments is successful when located near hillside.
 - d) People in England and in America knew the astronomy for many centuries before.

5. What does "they" in Line 15 refer to?
 - a) stones
 - b) archaeologists
 - c) sites
 - d) common points

Key

1: b, 2: c, 3: b, 4: d, 5: c

L1 Underwater archaeology is a relatively recent branch of archaeology. It didn't really develop until after World War II with the advent of scuba diving. Sites were first found in shallow water but as the technology developed, deeper sites were discovered and excavated. Underwater archaeology poses different challenges from regular site archaeology in location methods, excavation techniques, and artifact retrieval and conservation. When retrieved from marine or freshwater environments, artifacts are usually in some state of decomposition or corrosion. Because of their importance to the archaeological record, the conservation of these objects is *vital*. The methods used to conserve underwater L10 artifacts are the subject of this paper.

The conservation aspect of underwater archaeology is very time consuming and expensive, often costing more than the actual excavation itself. Yet, without proper preservation most of the recovered artifacts would be quickly lost along with important historical data. Such items as leather, wood, and even iron quickly deteriorate once brought to the surface and preservation methods have to be applied immediately. There are different categories of underwater archaeological sites in both salt and fresh water which include: submerged refuse sites; inundated settlements or harbors; shrines or sacred localities; and shipwrecks (Hamilton 1997). Whether artifacts are buried in the ground, buried in submerged sediments, L20 or are underwater, they have come to a condition of equilibrium with the natural materials they are buried with, and their deterioration has been slowed down or stopped. Those conditions that preserved them are removed when the artifacts are extricated from *their* location (Storch 1997).

Conservation of an artifact refers to the process of documentation, analysis, cleaning, and stabilization. The main objectives of cleaning and stabilization are to protect and prevent adverse reactions of the object to its environment. Restoration refers to the repair of damaged objects and the replacement of missing parts. An item might undergo both conservation and restoration, but conservation is more important than restoration, which should never be initiated without first conserving L30 the artifact.

Proper conservation of artifacts is important because it preserves the material remains of the past that are recovered and because it can provide almost as much archaeological data as do field excavations and archival research. The distribution of cultural material, as well as its form, has cultural significance and describe past cultural activities. Considerable insight into a culture can be attained by studying its material remains. For that reason, the preservation methods used should be reversible so that the material can be treated with other methods at a later date, if necessary, and the item isn't lost (Hamilton 1997).

*****end*****

Questions

1. What should be the title of this story?
 - a) Difficulty of underwater archaeology
 - b) Conservation and Restoration of underwater archaeology
 - c) Conservation methods of underwater artifacts
 - d) History of underwater archaeology

2. Which statement is not true according to the story?
 - a) The replacement of missing parts is not as important as the process of documentation.
 - b) In an early of underwater archaeology, the excavation was done in the deep water.
 - c) The cultural in past could be predicted from the forms of the artifacts.
 - d) The conservation must be done before the restoration.

3. The meaning of "vital" in Line 9 is similar to...?
 - a) necessary
 - b) available
 - c) time consuming
 - d) difficult

4. What does the story imply about the underwater archaeology?
 - a) Historical data of artifacts from underwater excavation could disappear faster than the excavation on ground.
 - b) The artifacts retrieved from marine were destroyed easier than artifacts in freshwater.
 - c) Underwater archaeology has interested the archaeologist.
 - d) Lots of artifacts could be excavated in deep water much more than in shallow water.

5. The italic word "their" in Line 23 refers to...?
 - a) artifacts
 - b) deterioration
 - c) conditions
 - d) natural materials

Key

1: c, 2: b, 3: a, 4: c, 5: a

Wiang Kum Kam

By Richard Ruth

Although Chiang Mai has long been a favorite destination for foreign tourists visiting northern Thailand, the city still conceals quite a few secret sites capable of dazzling those travelers willing to seek them out. And until quite recently, one of these hidden gems was visited only by a small group of archaeology enthusiasts 5 willing to journey the required two miles off the tourist map to explore it. Half-hidden behind a tranquil neighborhood of traditional wooden houses, Buddhist temples, and longyan orchards are the sprawling remains of Wiang Kum Kam, an ancient capital city that briefly ruled over Lanna, the former northern Thai kingdom, some eight hundred years ago. Wiang Kum Kam was established in 1281 10 AD by Chiang Mai's founder, the revered King Mengrai, but was destroyed after only 15 years when the Ping River suddenly changed course and flooded the city. King Mengrai moved his capital to the other side of the river, in the location of present-day Chiang Mai, after floodwaters inundated his city and rapidly buried it under silt.

15 It wasn't until 1984 that Thailand's Fine Arts Department sent archaeologists to excavate the site. During the first phase of the project, the team uncovered 20 Buddhist temples used by King Mengrai and his court, but they believe that many more remain buried under the suburban houses of the surrounding Saraphi District.

For years the area has been ignored by Chiang Mai's many tourists as well as by 20 its residents. Until this year, the only activity at Wiang Kum Kam involved the work of student archaeologists or the devotions of elderly Thai women praying at one of the ancient wihans. And except for an occasional visit by a few foreign academics, the excavated sites of Wiang Kum Kam remained empty. However, in January of this year the Tourist Authority of Thailand in Chiang Mai announced it 25 was planning a series of cultural exhibitions and Buddhist ceremonies at Wiang Kum Kam in order to introduce locals and foreigners to this little-known treasure. Whether these short-term promotions will draw tourists away from the town's more famous diversions remains to be seen. For now, though, Wiang Kum Kam remains a semi-secret site for history buffs and archaeology enthusiasts willing to discover it.

Join Richard in January 2004 on our captivating tour of Thailand that includes Wiang Kum Kam.

http://www.farhorizon.com/newsletter/spring03/nl_s03_2.htm

Word count: 371 words

Questions for Wiang Kum Kam

1. What is the main idea of this passage?
 - a) The archaeologists' projects in the north of Thailand
 - b) The discovery of an ancient city in the north of Thailand
 - c) Cultural exhibitions held by the Tourism Authority of Thailand
 - d) The history of King Mengrai

2. What happened to Wiang Kum Kam?
 - a) It was destroyed by King Mengrai after 15 years.
 - b) The Ping River suddenly changed course so people had no water to survive.
 - c) It is used as a temple for people nowadays.
 - d) It was flooded and buried.

3. What does "**residents**" mean? Line 20
 - a) people who live in one place
 - b) archaeologists who worked in the project
 - c) tourists who have been to the site
 - d) Winag Kum Kam's people

4. What does "**it**" refer to ? Line 5
 - a) a hidden gem stone
 - b) an archaeological site
 - c) a journey
 - d) the tourist map

5. Which is **not true** about Wiang Kum Kam?
 - a) It was just found recently.
 - b) It used to be a capital city of Lanna kingdom.
 - c) The history of Wiang Kum Kam was fully discovered by the work of student archaeologists.
 - d) After excavating, Wiang Kum Kam is still not a widely famous site.

Keys

1. b 2. d 3. a 4. b 5. c

Tens of thousand years ago, this land was covered with lush tropical rain forests. The fertile land, temperate climatic conditions, abundant natural resources attracted early settlers and migrants throughout the subsequent periods, even up to the present. Rich cultures amalgamated into distinct life styles. Emerging out of a
5 thousand years of consciously striving for unity were the T'ai people. City states soon unified into an independent kingdom. Emergent also was a distinct culture known as Thai.

Stone tools and implements of prehistoric man dating to the Paleolithic Period have been found throughout this country. Over 10,000 years ago, man lived near the
10 waterways in the north and central Thailand. Archaeological evidence of Neolithic settlements has been discovered in an area covering no less than 40 provinces. They include tools and decorative objects made of flint, bone and shells. Primitive paintings dating to this period exist in a number of caves. Metal works, both bronze and iron, appeared almost simultaneously some 2,700 years ago.

15 A part of prehistory in Thailand has become a subject for intensive study shedding new light on the evolution of man in southeast Asia. "Ban Chiang" used to be the name of a small village in Udonthani Province. Since the discovery that this modern settlement had been founded on top of an area rich in prehistoric archaeological evidence, the name has become well known worldwide and
20 synonymous with an important prehistoric culture.

Ancient Ban Chiang culture existed in scattered areas throughout the Northeastern region of Thailand. The people lived near water sources in dense forests. They gradually cleared the forest for settlements. They hunted with axes, spears, arrows, sling shots and fishing hooks. They cultivated rice in irrigated paddies
25 and learnt to use buffaloes in farming. They wove cloth out of natural fibers and might have printed patterns on the fabric by using rollers. They made and wore decorative **ornaments** such as glass beads, earthenware amulets and bronze bangles. They made stylistic pottery which had applied or and painted decorations both for household use and for ritualistic burial. They became proficient metal
30 workers quite early in prehistory, and discovered the use of iron almost contemporaneous with bronze.

The Ban Chiang people believed in the afterlife. They buried the dead accompanied with personal belongings, perhaps insignia of rank, containers of food and other burial goods. Theirs was a structured society which existed for thousands
35 of years until unknown causes disrupted their stable existence. There is no historical evidence of a direct link with the inhabitants of modern Ban Chiang, who are said to have migrated into the area from Laos some 200 years ago. Nevertheless, certain aspects of the contemporary lifestyle indicate some heritage from the past. However vague this link may be, modern Ban Chiang has benefited from the fame of the
40 ancient people.

<http://www.cs.ait.ac.th/wutt/prehi.html>

Word count: 466 words

Questions

1. Which information was **not mentioned** in the passage?
 - a) How Ban Chiang people lived in the past
 - b) What was found at the site
 - c) How old Ban Chiang could be
 - d) How Ban Chiang was discovered

2. Which statement is true about Ban Chiang?
 - a) Burial ritual was important for Ban Chiang's people.
 - b) Ban Chiang's people did not believe about life after dead.
 - c) Ban Chiang's people were very poor and had difficulty in living.
 - d) Ban Chiang's people knew a little about iron and bronze.

3. What does "ornaments" mean? Line 27
 - a) valuable jewelry
 - b) money
 - c) beautiful accessory
 - d) gem stones

4. What were **not found** in Ban Chiang's historical site?
 - a) hunting tools
 - b) different kinds of money
 - c) skeletons with goods
 - d) painted pottery

5. What is the passage mainly about?
 - a) Prehistory of Thailand with the emphasis on Ban Chiang
 - b) Prehistoric and modern Ban Chiang
 - c) Archaeological evidences in Ban Chiang site
 - d) Culture and history of T'ai people in Ban Chiang site

Key

1. d 2. a 3. c 4. b 5. a

Secret in the Stones Name:

Group:

No:

Texts and Answers sheet	Summary
<p>Text 1: The Dawn of Angkor Civilization</p> <ol style="list-style-type: none">1.2.3.4.5.	
<p>Text 2: Sailing to Distance Lands</p> <ol style="list-style-type: none">1.2.3.4.5.	
<p>Text 3: Mystery Hill: America's Stonehenge</p> <ol style="list-style-type: none">1.2.3.4.5.	
<p>Text 4: Underwater archeology</p> <ol style="list-style-type: none">1.2.3.4.5.	
<p>Text 5: Wiang Kum Kam</p> <ol style="list-style-type: none">1.2.3.4.5.	
<p>Text 6: Prehistory of Thailand</p> <ol style="list-style-type: none">1.2.3.4.5.	